This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (currently amended): A method for manufacturing a camshaft in which at least two completely machined individual cams (1, 2, 4) are fixedly mounted on a shaft in predetermined angular positions, whereby the shaft may consist in particular of an outside shaft (12) and an inside shaft (11) arranged concentrically inside the former,

~~characterized by~~ wherein the following manufacturing steps, to be performed in chronological order:

- the at least two cams (1, 2, 4) to be detachably mounted on the shaft (11; 12) are combined to form a machining module before being mounted on the shaft, whereby the first cams (1, 2) which are immovable with respect to one another on the finished camshaft are aligned in an arrangement corresponding to the final arrangement on the shaft (11; 12),
- at least the cam contours of the at least two cams (1, 2, 4) are completely machined within the machining module from the radial peripheral surfaces of the cams,
- the completely machined cams (1, 2, 4) are mounted on the shaft (11; 12) within the machining module,

- the first cams (1, 2) which are immovable with respect to one another on the finished camshaft are fixedly connected to the shaft (11; 12) in their arrangement within the machining module that is fixedly defined at least with regard to their angular position,
- the detachable joining of the cams (1, 2, 4) within the machining module is separated, whereupon positioning means and/or auxiliary connecting means (3, 5) that may optionally be used within the machining module are removed.

Claim 2 (currently amended): The method for manufacturing a camshaft on which the cams (1, 2, 4) to be mounted are spaced an axial distance apart, according to Claim 1,

~~characterized in that~~ wherein

such axial spacings in the machining module are set by the spacers (3) used there.

Claim 3 (currently amended): The method according to ~~claim 1 or 2,~~

~~characterized in that~~ claim 1, wherein,

the spacers (3) as components that are open at the circumference are provided with an opening larger than the respective outside diameter of the shaft occupied by the cams,

whereby this is true with regard to the outside diameter of the outside shaft (12) in the case of a shaft composed of an inside shaft (11) and an outside shaft (12).

Claim 4 (currently amended): The method according to ~~any one of the preceding claims~~ claim 1, in which one of the cams (1, 2, 4), namely a second cam (4) has a radial fitting borehole (7) to receive a fastening element (13) which secures this second cam (4) on the inside shaft (12),
~~characterized in that~~ wherein
the fitting borehole (7) is created while the respective second cam (4) is within the machining module.

Claim 5 (currently amended): The method according ~~to any one of the preceding claims, characterized in that~~ claim 1, wherein screws (5) which pass axially through the cams (1, 2, 4) serve as the means for producing the detachable joining.

Claim 6 (currently amended): The method according to ~~any one of the preceding claims, characterized in that~~ claim 1, wherein least two screws (5) are distributed over the circumference of the cams (1, 2, 4).

Claim 7 (currently amended): The method according to ~~any one~~

~~of the preceding claims,~~

~~characterized by~~ claim 1, comprising the features

- a thread (6) of a screw (5) engages in a mating thread which is provided in a spacer (3) situated at a distance from the screw head,
- at least two screws (5) are inserted in opposite directions axially with regard to the position of their heads and threads.

Claim 8 (currently amended): The method according to ~~any one of the preceding claims,~~

~~characterized in that~~ claim 1, wherein

axial dowel pins are used as positioning means inside the machining module.

Claim 9 (currently amended): The method according to ~~any one of Claims 1 through 7, characterized in that~~ claim 1, wherein

the screws (5) are designed as fitting screws.

Claim 10 (currently amended): The method according to ~~any one of the preceding claims~~ claim 1 for manufacturing a camshaft in which the shaft on which the cams (1, 2, 4) are mounted is made of two shafts that are adjustable in relation to one another and are situated concentrically one inside the

other, namely an inside shaft (11) and an outside shaft (12) and first cams (1, 2) are fixedly connected to the outside shaft (12) and second cams (4) are fixedly connected to the inside shaft (11) via radial connecting elements (13) which pass through the outside shaft (12),

~~characterized in that~~ wherein

- the machining of the radial inside surfaces for all cams (1, 2, 4) is performed for all cams to the same diameter and
- a recess (9) having a reduced diameter is provided on the outside shaft (12) for receiving the second cam (4), whereby the reduction is of such an extent that play-free rotation of the second cam (4) on the outside shaft (12) is ensured.